

ABSTRACT

5 A process for preparing particles of zinc sulfide-based electroluminescent phosphor having a
moisture resistant coating thereon which comprises the steps of selecting a reaction vessel
having a given height and a porous disc at the bottom thereof; charging the reaction vessel
with phosphor particles and fluidizing the particles by introducing an inert gas into the vessel
through the porous disc; heating the reaction vessel to a reaction temperature; introducing a
coating precursor into the reaction vessel at a position adjacent the bottom of the vessel but
10 above the disc; introducing a co-reactant into the reaction vessel at a position substantially
mid-way of the given height; and maintaining the inert gas flow, the precursor flow and the
co-reactant flow for a time sufficient for a reaction to occur and coat the phosphor with the
moisture resistant coating. Apparatus for carrying out the process is also disclosed.